

CLAIMS

WHAT IS CLAIMED:

1. A method to reduce false switch hook detection in a line card coupled to a subscriber

5 loop, comprising:

operating in a first state of the line card;

receiving a control signal;

disabling switch hook detection in the line card;

determining an initial condition of a second state of the line card;

operating in the second state of the line card in response to receiving the control signal,

wherein the second state begins to operate from the determined initial condition;

and

activating the switch hook detection in the line card.

2. The method of claim 1, further including providing a ringing signal to the subscriber loop.

3. The method of claim 2, wherein the ringing signal is provided in response to the ringing signal crossing a voltage at a ring and tip ring terminal of the line card.

4. The method of claim 2, wherein receiving the control signal comprises receiving a ringing control signal.

5. The method of claim 4, wherein operating in the first state comprises operating in at least one of a standby state and an active state of the line card.

6. The method of claim 5, wherein determining the initial condition of the second state includes determining the initial condition of the ringing state of the line card.

7. The method of claim 6, wherein determining the initial condition of the second state comprises determining the initial condition based on a ratio of a full scale current value in the first state and a full scale current value in the second state.

8. The method of claim 1, further including storing a voltage between a ring and tip terminal of the line card.

9. The method of claim 1, wherein receiving the control signal comprises receiving a control signal to stop ringing providing that ring trip has not occurred.

10. The method of claim 9, wherein operating in the first state comprises operating in a ringing state of the line card.

11. The method of claim 10, wherein operating in the second state comprises operating in at least one of a standby state and an active state of the line card.

12. The method of claim 11, wherein determining an initial condition of the second state of the line card comprises setting the initial condition to a value less than a switch hook threshold.

13. The method of claim 12, wherein the second state begins to operate from the determined
5 initial condition includes adjusting a current to the subscriber loop.

14. The method of claim 1, wherein receiving the control signal further comprises receiving a
ring trip detection signal to stop ringing.

15. The method of claim 1, wherein operating in the first state of the line card further
comprises operating in a ringing state of the line card.

16. The method of claim 1, wherein operating in the second state of the line card further
comprises operating in an active state of the line card.

17. The method of claim 1, wherein determining an initial condition of the second state of the
line card further comprises setting the initial condition to a value larger than a switch hook
threshold.

18. The method of claim 1, wherein the second state begins to operate from the determined
initial condition includes adjusting a current to the subscriber loop.

19. An apparatus to reduce false switch hook detection, the apparatus capable of operating in at least a first and a second state, comprising:

switch hook detection logic; and

logic adapted to:

receive a control signal;

determine an initial condition of the second state;

operate in the second state in response to receiving the control signal, wherein the

second state begins to operate from the determined initial condition; and

activate the switch hook detection logic.

20. The apparatus of claim 19, the logic further adapted to provide a ringing signal to the subscriber loop.

21. The apparatus of claim 20, wherein the logic adapted to receive a control signal comprises the logic adapted to receive a ringing control signal.

22. The apparatus of claim 21, wherein the logic adapted to operate in the first state comprises operating in at least one of a standby state and an active state.

23. The apparatus of claim 22, wherein the logic adapted to determine the initial condition of the second state includes the logic adapted to determine the initial condition of the ringing state.

24. The apparatus of claim 23, wherein the logic adapted to determine the initial condition of the second state comprises the logic adapted to determine the initial condition based on a ratio of a full scale current value in the first state and a full scale current value in the second state.

5 25. The apparatus of claim 19, the apparatus comprising a ring and tip terminal, the apparatus further including logic adapted to store a voltage between a ring and tip terminal.

26. The apparatus of claim 19, wherein the logic adapted to receive the control signal comprises the logic adapted to receive a control signal to stop ringing.

27. The apparatus of claim 26, wherein the logic adapted to operate in the first state comprises the logic adapted to operate in a ringing state.

28. The apparatus of claim 27, wherein the logic adapted to operate in the second state comprises the logic adapted to operate in at least one of a standby state and an active state.

29. The apparatus of claim 28, wherein the logic adapted to determine the initial condition of the second state comprises setting the initial condition to a value less than a switch hook threshold.

30. The apparatus of claim 29, wherein the second state begins to operate from the determined initial condition includes adjusting a current to the subscriber loop.

5 31. A line card, comprising:
a subscriber line interface circuit coupled to a subscriber loop; and
a processor coupled to the subscriber line interface circuit, wherein the processor is
adapted to:
operate in a first state of the line card;
receive a control signal;
interrupt switch hook detection in the line card;
determine an initial condition of a second operating state of the line card;
operate in the second state of the line card in response to receiving the control
signal, wherein the second state begins to operate from the determined
initial condition; and
activate the switch hook detection in the line card.

15 32. The line card of claim 31, wherein the subscriber line interface circuit is a voltage-feed
subscriber line interface circuit.

33. The line card of claim 31, wherein the processor further adapted to provide a ringing
signal to the subscriber loop.

20 34. The line card of claim 31, wherein the processor adapted to receive a control signal
comprises the logic adapted to receive a ringing control signal.

35. The line card of claim 34, where the processor adapted to operate in the first state comprises operating in at least one of a standby state and an active state of the line card.

36. An apparatus to reduce false switch hook detection in a line card coupled to a subscriber

5 loop, comprising:

means for operating in a first state of the line card;

means for receiving a control signal;

means for disabling switch hook detection in the line card;

means for determining an initial condition of a second operating state of the line card;

means for operating in the second state of the line card in response to receiving the

control signal, wherein the second state begins to operate from the determined

initial condition; and

means for activating the switch hook detection in the line card.

37. A method to reduce false switch hook detection in a line card coupled to a subscriber

loop, comprising:

operating in a first state of the line card;

determining if a ring trip occurs;

disabling switch hook detection in the line card;

determining an initial condition of a second state of the line card;

operating in the second state of the line card in response to determining the ring trip,

wherein the second state begins to operate from the determined initial condition;

and

activating the switch hook detection in the line card.

38. An apparatus to reduce false switch hook detection in a line card coupled to a subscriber loop, comprising:

means for operating in a first state of the line card;

means for determining if a ring trip occurs;

means for disabling switch hook detection in the line card;

means for determining an initial condition of a second state of the line card;

means for operating in the second state of the line card in response to determining the ring trip, wherein the second state begins to operate from the determined initial condition; and

means for activating the switch hook detection in the line card.

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